

REMARKS/ARGUMENTS

Claims 1, 15, 21, 29 and 30 have been amended.

Support for the amendments are found on page 1, lines 16-34, page 13, lines 1-23 and page 3, line 3 of the originally filed specification. No new matter is added.

The rejection of Claims 15, 19 and 21 under 35 U.S.C. § 102(b) over Lindemann (US 5,190,997) is respectfully traversed.

The present invention is directed to an insulation product prepared by melting a glass or rock mineral composition, fiberizing the molten glass or mineral composition into filaments to form a mineral wool, applying a size comprising a thermosetting resin to the mineral wool which has just been formed, simultaneously or sequentially applying a hydrophilic latex to the mineral wool, then taking up the sized mineral wool in the form of a web, and then thermally curing the size. Note the size is applied to the filaments immediately after the formation of the mineral wool and before being thermally cured.

Lindemann however discloses a glass fiber mat with a binder prepared by treating a polyester scrim fabric with silicone release coating and catalyst which is then cured, placing the scrim in a paper hand sheet former, closing the unit, then separately preparing a fiberglass slurry in water, adding water and polyoxyethylated alkylamine further diluting the fiberglass slurry, and dropping the diluted slurry is through the scrim which forms an unbonded fiber mat. Subsequently, the unbonded glass fiber sandwiched between layers of scrim is immersed in the aqueous bonding solution made from urea-formaldehyde (U-F) binder, the mat is then removed and dried, and the scrim material is peeled away (see col. 23, line 50 – col. 24, line 64).

Applicants point out that a binder is different from a size. As Lindemann discloses, binder refers to a composition which is applied on the fibers once they are formed, as a post-treatment step, whereas a size refers to a composition which is applied on the filaments

during (or immediately thereafter) the formation of a mineral wool. Clearly, the specific property requirements for the size are different than a binder as the size requires sprayability, water-dilutability and thermal stability.

Furthermore, a product wherein the filaments have been uniformly applied with a sizing composition comprising a hydrophilic latex (the present invention) prior to any shaping operation will inevitably possess different characteristics when compared to a product where a binder is applied to a preformed glass fiber held together by scrims, wherein the scrim is subsequently removed (Lindemann disclosure). As the process leads to a product that is distinct from the product disclosed in the cited reference, the rejection should be withdrawn. Withdrawal of the rejection of Claims 15 and 19 is requested.

Lindemann is also silent to a sizing composition comprising a phenolic resin as claimed in Claim 21. Withdrawal of the rejection of Claim 21 is requested.

The rejection of Claims 1-2, 5-14, 16-18 and 22-34 under 35 U.S.C. § 103(a) over Lindemann, and in view of PCT Publication WO 95/31411 or PCT Publication WO 98/40437 is respectfully traversed.

In view of the remarks set forth previously, Claims 16-18, 28, and 33-35, which depend on Claim 15, should be allowable. Withdrawal of the rejections is requested.

Similarly, in view of the remarks set forth previously, Claim 30 also contains allowable subject matter. Withdrawal of the rejection is requested.

Furthermore, the method to improve the mechanical strength after ageing of an insulation product comprising mineral wool is clearly distinct from the disclosure of Lindemann. Lindemann discloses improvement of dry and wet tensile and the tear strength of the glass fiber mat by the addition of thermoplastic copolymers to the U-F resin (see col. 25, lines 36-38), but is silent to steps claimed in the present invention, as previously discussed in detail. PCT Publications WO 95/31411 and WO 98/40437 both also fail to

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disclose the steps claimed in the present invention. As the limitations in the present claims are not met by the cited references, the rejection of Claims 1-2, 5-14, 22-26, 29 and 31-32 should be withdrawn. Withdrawal of the rejection is requested.

Applicants submit that the application is now in condition for allowance. Early notification of such allowance is earnestly solicited.


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